New Experiments, And Useful OBSERVATIONS CONCERNING Sea-Water MADE FRESH,

According to the Patentees Invention:

In a Discourse Humbly Dedicated to His Majesty the KING of *Great-Britain*, &c.

By a Fellow of the *Colledge of Physicians*, and of the *Royal-Society*.

Printed *Anno Dom.* 1683

BIBLIOTHECA BODLEIANA
DOMINUS ILLUMINATIO MEA

TO THE
KING's Most Excellent Majesty,

May it please your Majesty,

THE making *Sea-water* Fresh, hath of late bin much discours'd of, and is of great Consequence, not only with respect to *Merchant-ships*, but also, as I conceive, to your *Majesties Navy* and *Garrisons*, and to *Sea-Port-Towns* in all parts of the World, where good Water is wanting.

All that is proper to be ſaid upon the Matter, will lie in making good theſe three *Aſſertions*.

I. *That* Sea-water *may eaſily, ſafely, commodiouſly, in ſufficient quantities, be made Freſh for all common Uſes at* Sea.

II. *That ſo done, it is as wholſom to be Drunk, and us'd about Dyet, as any other* Water *now in uſe at* Sea.

III. *That being ſo, the* advantages *are ſuch, as will much more than countervail the* charge *and* trouble *about it.*

FOR the Truth of the Firſt, we have the Reputation of the Gentle-

Gentlemen who have your Majesties *Patent* for it, and their *Interest* also to assure Us. By an Instrument scarce a yard over, which may stand under the Deck of any Ship, or very well in the Cook-room, and all Smoak and Fire avoided; they can make about ninety Gallons in twenty four hours: Which at the largest Allowance, of three quarts to a man, being kept at constant working, will serve about a hundred and Twenty men; although two quarts a day, or three pints, in time of scarcity, is counted a good allowance for one man.

We are likewise assured, that it may be done with ease

and ordinary attendance: For although the *Sea* be *Salter* in ſome places than in others, yet the Operation is the ſame; neither is there any difference betwixt that which comes firſt, and laſt. And whatever is to be put into the *Engine* with the *Water*, may as eaſily be done, as *Salt* or *Oate-Meal* into Pottage: So that one man may ſerve both to make the *Drink*, and for other uſes of the *Ship*.

By Mr. *Boyle* we are alſo aſſured, *That* Sea Water *thus made Freſh, is as Wholeſome to be Drank, as any Water about the Town, in its beſt condition.* And by an Ingenious *Phyſician* of the Colledge, a proper com-

pariſon

parison hath been made betwixt *This*, and the best *Water*. And so many of the Colledge, as were desired, have not doubted to give it under their Hands, *That they were satisfied of the Wholesomness of this* Water.

Notwithstanding which, to give the World a little more express proof of the matter; I shall, with your Majesties leave, undertake the same; which I think, I may the more properly do, because I have no share either in the Profit of it, or in the Credit of the Experiment.

Now, all the Signes, which either *Physicians*, or common Ex-

Experience, have given of the best *Water*, are these; *viz. Clearness*, *Thinness*, *Sweetness*, *Softness*, *Lightness*, *Durableness*, and *Pureness* or *Simplicity*; with all which good qualities, if this *Water* stands in the first rank, I suppose no rational man will further dhay'e whether it be Good, or *Oo*.

The *Clearness* hereof, although it may be pretty well observ'd in a good *Flint-Glass*; yet I consider'd, that as there are degrees of Heat and Cold, of which our Bodies being unsensible, can only be judg'd of by a *Weather-glass*: So there may be degrees of Perspicuity, which the Eye, unless assisted,

will

will not eaſily reach; as may appear by this eaſie Experiment.

If a few drops of *Claret* be put into *Freſh Sea-water*, (ſuch as is made by the *Patentees*, and with which I made This, and all the following Experiments) they will give it a kind of *Light Hiacynthine Red*. But if the ſame quantity of *Claret* be drop'd into as much *River-water*, and that after the *Water* hath ſtood in a *Ciſtern* to ſettle a conſiderable time, it will look Muddy; as if a drop of *Ink* had been put into it; the *Claret* diſcovering thoſe *Opacous* parts, which before were not eaſily diſcern'd.

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The ſame is likewiſe an argument of the *Thinneſs* of this *Water*. As is alſo the Preparation of it by *Fire*; for the very *Boiling* of *Water*, is one way recommended by *Hyppocrates*, and commonly uſed for the *Attenuating* of it; that is, the *Separation* of any *Groſs* and *Heterogeneous* parts, which ſwim therein, and upon *Boiling* uſe to *Subſide*: And the greateſt part of *Rain-water*, which is as *Thin* as any, is *Diſtilled* from the *Sea*.

Its *Sweetneſs* recommends it, both as to the *Smell* and *Taſt*; for the beſt *Water* hath no *Scent*, neither hath this any. And ſo for the *Taſte*; 'tis true, a little

Alka-

Alkaline Salt, in the opinion of ſome *Water-Drinkers*, gives a kind of *Sweetneſs* or *Savourineſs* to *Water*, as *Salt* to their *Pottage*; for which cauſe, I have known them to prefer *Pump-water* before any other ſort. But the beſt *Water*, and that which is generally, both by *Water-Drinkers* and others moſt eſteem'd, is no otherwiſe *Sweet*, than in being very *Soft* upon the *Tongue*, and rather *Inſipid*; and ſuch is this *Water*.

Neither doth it excel in *Sweetneſs* or *Softneſs* to the *Taſte* alone; but alſo to the *Touch*: Of which quality, *Dyers* and *Laundreſſes* (who are very Critical at their *Finger-ends*) make

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the beſt Judgment in mixing their *Water* with *Soap*. But a different degree of *Heat*, or proportion of *Soap*, will alter the Caſe: And therefore, to make the *Tryal* exact, let half a Pint of *Pump-water* be Warmed to a convenient degree, and half a *Drachm* of *Common Soap* diſſolv'd therein; in doing of which, it will be very difficult to raiſe a good *Lather*; the *Water* underneath it will look muddy and unequal, as if it were *Curdled*, and when the *Lather* falls, it lies on the *Water*, or any thing it is put upon, like *Greaſe*, yet feels *Harſh*.

The ſame quantity of *Soap* and *River-water*, and the *Water* Heated

Heated to the ſame degree, make a high *Lather*, and that in a ſhort time, and the *Water* alſo under it, is equal and *Clear*.

In all which reſpects, this *Freſh-Sea Water* doth not only equal that of the *New-River* or *Thames*, but excels it: For beſides, that, it is rather *Clearer* when the *Soap* is diſſolv'd; it alſo makes as ſtrong a *Lather*, in a ſhorter time, and with leſs *Soap*; inſomuch, that the Woman I caus'd to make the Tryals, and compare them, not knowing whence I had any of the *Waters*, gueſs'd, that above a pound and a quarter of *Soap*, would not go ſo far with *Thames Water*, as a pound would

would do with this *Freſh-ſea-water*.

Another Circumſtance is, That if the *Water* be extraordinary Good, it will make a very good *Lather* without being Heated, which this *Water* will alſo do.

This ſame *Water* is alſo as *Light* as any common *Water* whatſoever; as may beſt be prov'd by a *Water-Poiſe*, which the *Italians* commonly uſe, when they would try the *Lightneſs*, and therein the *Goodneſs* of their *Water*. For this purpoſe I mark'd the neck of one with ſeveral Degrees equally diſtant, Immerſed it in the

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ſeven following *Waters*; wherein it ſunk leſs or more, according to the *Gravity* or *Lightneſs thereof.*

In the *Pump-water* in *Chancery-lane*, (a *Heavy Water*) it hardly dips to the firſt, or lowermoſt Degree.

In the *Pump-water* in *Chriſt's-Hoſpital*, juſt to the lowermoſt.

In the *Conduit-water* in *Cheapſide*, to the ſecond, or near it.

In *Thames-water*, *New-River-water*, *Water* diſtill'd from *Spring-water*, and in *Freſh Sea-water*, to the third, or there about.

So that it is as *Light*, as common *Water* distill'd.

Neither is there any *Water* more Durable or Uncorruptible: For all Corruption in *Water*, sheweth it self one of these four ways; either by some ill *Taste* or *Smell*, or by becoming *Muddy* or *Turbid*, or by gathering some *Skin*, or *Bubbles* at the Top, or by letting some *Sedement* fall to the Bottom; none of all which happeneth to this *Water*, though some of it hath been kept, both in and out of the *Sun* for nine Months; and without all doubt, would continue so much longer.

The last mention'd quality of the best *Water*, was, its *Purity*; that is, *Simpleness*, or *Homogenity* of *Parts*.

I deny not, but rather contend, That there is a certain *Aereal Nitre* incorporated with all *Water*; of a different nature from *Nitre* commonly so call'd, and such as by no means yet known, can be visibly seperated from the *Water*: From hence, chiefly it is, I conceive, that *Water* obtains its *Cooling* quality; and that when it *Freezes*, it is not because it is then only impregnated with this *Nitre*; but because then the *Air* being Surcharg'd, throws off a greater quantity

into it: As when *Water* is Sweeten'd or Seaſon'd with a little *Sugar*, it doth not follow that there is none in it, becauſe not enough to make it *Candy*. So there is of this inviſible *Nitre* in *Water*, always enough to Seaſon it, though not to make it *Candy*, or turn to *Ice*.

Now allowing this *Nitre*, that *Water* which in all other reſpects is the moſt *Simple*; is alſo juſtly to be eſteem'd moſt Wholeſom, and always hath been ſo. For as the Humours of the *Eye*, which is the *Inſtrument*, and the *Air* the *Medium*, by which we diſcern all *Colours*, ought to be themſelves perfectly *Tranſparent* and *Colourleſs*:

So

So *Water*, which is only a *Vehicle* to our *Food*, ſhould be it ſelf the moſt Simple, and freeſt from all manner of Qualities, beſides thoſe proper to it as *Water*. For if it be deſired at any time to be *Embued* with any other *Quality*; it is with reſpect to ſome *Medicinal Uſe*, and not *Common Diet*.

Now this *Purity*, or *Homogenity* of *Parts*, doth eminently belong to this *Freſh Sea-water*, as I ſhall make it appear ſeveral ways; and therewithall, ſhew the Reaſon of its other *Good Qualities*; eſpecially, of its *Softneſs*, *Lightneſs* and *Incorruptibility*.

And first, the reason of its *Softness*, is its *Purity*; or its being undefiled with any kind of *Corrosive Salt*, whether *Alkaline*, *Marine*, or *Acid*.

For upon *Evaporating* of any hard *Pump-water*, most *Spring-waters*, and *River-waters*, in a *Glass-Vessel*, or one very well *Glased*; it is evident, that the former contains a considerable quantity of *Salt*: A *Gallon* from the *Pump* in *Chancery lane*, which is the *Saltest Water* in this *City*, will yield near three *Drachms*: Not of an *Alluminous Salt*, as is commonly thought, but an *Alkaline*, with the *Taste* and other properties of a *Lixiviall Salt*.

That

That *Spring-waters*, though they yield more or leſs of the ſame *Salt*; yet in a far leſs quantity, and that *River-waters* yield the leaſt of all: Of which three ſorts of *Waters*, the firſt are the *Hardeſt*, the laſt the *Softeſt* of any in common uſe; yet excelled by *Freſh Sea-water*, as appears by one of the foregoing *Experiments*.

Neither is there any *Marine-Salt* herein: For whereas half a Pint of this *Freſh Sea-water*, or of *River-water*, and half a *Drachm* of common *Soap*, will of themſelves make a very good *Lather*: If but twelve or thirteen *Grains* of common *Salt* be added to the *Water* before

the *Soap* be diſſolv'd therein, it will *Curdle*, and the *Lather* fall like *Greaſe* upon it, as if it were ſome *Harſh Pump-water*.

Nor yet any *Acid*: For if you put but ſeven or eight drops of *Oyl* of *Vitriol* into half a Pint of *River-water*, though you increaſe the former quantity of *Soap*, yet it will never make any *Lather* at all.

Or to come yet nearer; ſhould any ſuſpect that ſome kind of *Spirit of Salt* may come off with the *Water*; if but ſeven or eight drops of *Spirit of Salt* be put to half a Pint of *River-water*, it will, in the ſame manner, hinder it from making

making any *Lather*. Nay, if but two or three drops be put into it, they will have the ſame effect.

So the reaſon why *Freſh Sea-water*, as prepar'd by the *Patentees*, is ſo extream *Soft*, is its *Purity*, or freedom from all manner of *Salts*, ſave only that *Aereal Nitre*, which is common to all *Water*, and chiefly contributes to its *Cooling* quality.

Or if any one ſhould be ſo Pertinaceous, as to ſay, that yet there may be one *Grain*, or part of a *Grain* of *Salt*, or one drop or part of a drop of *Spirit* of *Salt*; ſhould thus much be granted, then in the

ſame

ſame quantity of *Thames-water*, there is as much, or more; this being a *Softer Water*, than even *Thames-water* it ſelf.

The *Purity* of this *Water* is alſo argu'd from its *Lightneſs*. The perfect Diſſolution of any *Salt*, or *Earth*, in *Water*, in never ſo ſmall a quantity, adding weight to it. So, for Example, if half a *Drachm* of common *Salt* be diſſolv'd in a Pint of *River-water*, the *Water-Poiſe* will dip no lower into it, than into any *Harſh Pump-water*. So that in a Pint of ſuch *Water*, there is about half a *Drachm* of *Salt* and *Limy-Earth*, more than in *River-water*: For although ſuch *Water* be as *Clear* or *Tranſparent*

ſparent as any *Diſtill'd-Water*; yet in the Evaporation, ſome portion of *Earth* is always precipitated together with the *Salt*.

So likewiſe, if half a *Drachm* of *Oyl of Vitriol*, or *Spirit of Salt*, be put to a Pint of *River-water*; the *Water-Poiſe* will dip therein, but to the ſame Degree, as if the ſame quantity of *Salt* had been put into it.

Since therefore the *Gravity* or *Lightneſs* of *Water*, depends upon the Diſſolution of more or fewer *Salt*, *Acid*, or *Earthy* parts therein: And that *Freſh Sea-water* is rather *Lighter* than *River-water*, and as *Light* as any common *Water*

Diſtil'd

Distill'd, as hath before been prov'd: The one is as pure and free from all kind of *Salt*, *Acid*, or *Earthy* parts, as the other.

From whence, and from its being void of any *Taste* or *Smell*, 'tis also easie to conclude how it is so *Permanent* and *Incorruptible*: For in this Case, there can be no *Corruption* without *Fermentation*; nor any *Fermentation*, where there is no *Sulphur*, nor any other *Fermenting Principles* to be any way discover'd: So that as the *Simplicity* of this *Water*, is the reason of its Duration: So this, with the Premises, an evident proof of its *Pureness* and *Simplicity*; which still may be further

ther confirm'd by the following *Experiments*.

Let

~~Take~~ about half an *Ounce* of *Syrup of Violets* be Diſſolv'd in half a Pint of ſome *Harſh Pump-water*; in a ſhort time, the *Water* turns the *Syrup* to a *Muddy Green Colour*: This I have known to happen to ſome *Apothecaries*, as much to their *loſs*, as their *wonder*, from whence it ſhould proceed. But the reaſon was, though they took ſufficient care in picking their *Violets*; yet not in the choice of their *Water*.

Put a few drops of *Oyl of Vitriol*, or *Spirit of Salt* to the ſame quantity of *River-water*,

and

and then let the ſame proportion of *Syrup of Violets* be diſſolv'd therein, and it preſently turns *Purple*.

But if the *Syrup* be diſſolved in *River-water* alone; it turns neither *Green*, nor *Purple*, but holds its *Blew Colour* perfect; and ſo it doth the like, if it be diſſolv'd in *Freſh Sea-water*.

Obſerving this, I proceed to make the like *Experiment* with *Claret-wine*, which I mixed with ſeveral ſorts of *Water*, in ſome good quantity, as I did the *Syrup*: But without any diſcernable difference between them.

But conſidering that the *Colour* of *Claret* being very full and ſtrong, might require a much greater proportion of *Water* to over-rule it: I put three Spoonfulls of *Pump-water* into a *Flint-Glaſs*, and drop'd into it not above ſeven or eight drops of *Claret*; which being well mix'd, I perceiv'd, that in a little time after, the *Colour*, inſtead of being changed, was wholly vaniſh'd, and the *Water* become as *Clear*, as before the *Claret* was drop'd into it. The *Alkaline* parts in this *Water*, deſtroying the *Acid*, and therewith the *colour* of the *Claret*.

The ſame number of *Drops*, being mix'd with the ſame quantity

quantity of *Lambs-Conduit-Water*, in a *Glaſs* of the like Metal, Bigneſs and Shape; the *colour* in a ſhort time, did almoſt, but not wholly vaniſh.

Mix'd in like manner with *River-water*, it gives a few *Permanent Rays* of *Red*, but *Muddy*; as was before obſerv'd, and is here again to the preſent purpoſe.

But being mixed in the ſame proportion, and *Glaſs*, with *River-water* Diſtill'd, gives it a *Light*, *Clear*, and *Permanent Hiacynthine Red.*

And

And the ſame Curious and Durable *Red*, it likewiſe imparts to *Freſh Sea-water*.

From whence, and all that hath been ſaid before, it appears, To have the *Clearneſs* and *Durableneſs* of *Spring-water*; the *Lightneſs* or *Softneſs* of *Rain* or *River-water*, the *Sweetneſs* and *Simplicity* of that which is Diſtill'd: And in a word, all the good Qualities of the beſt *Water*, without any bad one: Which may ſerve to ſatisfy any Reaſonable man, not only to make Tryal of it; but alſo to prefer it before any other now in uſe at *Sea*.

Yet becauſe men will hardly be brought to leave a known Road, though a bad one; for

a better unknown, till they ſee ſome body go before them: Therefore, to diſcharge all manner of ſcruple, I muſt not omit to add, that there are ſeveral Perſons of Quality, and others, who have Drunk often and liberally of this *Water*; and though not much uſed to Drink *Water*, yet have receiv'd no prejudice thereby. And amongſt them, ſome *Water-Drinkers*; whom I take to be the moſt proper Judges in the Caſe, and who give the Character of it, *To be very Wholeſome*; and that it will quench the *Thirſt*, as well as any other ordinary *Water*.

The Feazibleneſs of making ſufficient quantities of *Sea-water*

Freſh,

Freſh, and the Wholeſomneſs hereof, being granted: The Advantages which will ariſe from the uſe of it at *Sea*, are very obvious, with reſpect, both to *Profit* and *Health*.

And firſt, as to *Profit*. Suppoſe the Voyage to be made to *Surrat*; for which, one Butt of *Water*, for *Drink* alone, is the ordinary Allowance for one man. The quantity being always laid in, not only according to the length of this or any other Voyage; but alſo for a Reſerve in caſe of a Calm; which, if it happen not, they have commonly more than enough. So that if we ſuppoſe a hundred men to be in the

Ship, they will require ſo many Butts for *Drink*. Whereas, if there be no *Water* laid in, but only an *Inſtrument* to make it, as there is need: The *Coals* to work it a day and half, that is, to make about a Butt (126. *Gallons*) of *Freſh Water*, may be allowed to be ſomething more than a *Buſhell*, which will be the moſt; or for a hundred *Butts*, to be about a hundred and ten *Buſhels*. So that one *Butt* containing fifteen *Buſhels*; a hundred and five *Buſhels* will lie in the room of ſeven *Butts*. By which means, about thirteen parts of fourteen now taken up for *Water*, will be gain'd for *Stowage*; ſaving that there muſt be ſome

few

few *Cask* for receiving the *Water* as it is wrought off from the *Engine*. And the like computation, or near it, may be made with reſpect to any other *Fewel*, which may alſo be uſed as well as *Coal*. Beſides which, the ſaving the Charge of the *Butts*, will be very conſiderable; the Price of a *Butt* being twenty Shillings, being bound with *Iron*.

Beſides which, there are other particulars, relating to *Profit*, and the preventing of *Damages* both at *Sea*, and in *Sea-port Towns*; upon which the Honourable Mr. *Fitz-Gerald* in his late Book, doth very Pertinently inſiſt.

I ſhall therefore conclude with

the ſecond great Advantage which will hence ariſe, and that is, in point of *Health*. 'Tis true, that *Thames-water*, when firſt laid in, hath the repute of no *Unwholſom Drink*. And generally, though not always, good care is taken in laying it in both at the beſt time, which is at half Ebb: and in caſe of great *Tides*, above the *Bridge*, ſometimes as high as *Chelſey*. And though it *Ferments* and *Stinks* in the *Voyage*, yet grows *Sweet* again: And, as they ſay, doth not *Stink* all at one time. Notwithſtanding which, there are very few, who would chooſe a Suſpicious *Water*, that may have *Spring-water*, if they will, or that which is as good; or better

better, if it be true, which ſome ſay, That in a large *Voyage*, long even ſome *Spring-waters* will *Ferment* a little. For the mixing with *Wine*, or any other uſe, it would be no ſmall pleaſure to the *Captain* of a Ship, to be ſure of that which is the beſt. And it is as a Rule among the *Seamen*, that good *Water* ſhall be valued, and go as far as *Brandy*, when they Club together for a Bowl of *Punch*.

In point of *Health*; perad. venture, while the *Thames-water* is in the heighth of its Ferment, even the *Seamen* may forbear to Drink it. Yet we have no reaſon but to believe, when that is over, before the *Water* be throughly recover'd,

it often goes down well enough with them; who living in ſo Thick and Moiſt an *Air*, and having their *Mouths* always *Fir'd* with *Salt-Meats*, cannot be very Critical either in their *Taſte* or *Smell*. So that though the *Scent* and *Taſte* of the *Water*, with reſpect to the *Seamen*, is not much to be regarded, yet their conſtant *Drinking* of a *Fermenting Liquor*, though but for ſome days, may be of ill conſequence, and for that time, the more encline them to *Calentures* and other *Feavors*; eſpecially near the *Line*, where they are more ſubject to them, and the *Water* to its higheſt *Ferment*. For the maintaining whereof, there is

a conſiderable ſtock of *Matter* in the *Water*, how ſimple ſoever it may ſeem to be. Inſomuch, that after any long *Voyage*, it will *Burn* or give a *Flaſh*. Whereas *Freſh Sea-water*, being free from all manner of *Inflammatory* and *Fermenting Principles*; it can no way conduce to the production of the fore-mention'd *Diſeaſes*, but will rather prevent them.

But ſuppoſing *Thames-water* were always *Wholſom*; yet the *Water* in many other places, where *Ships* are often forc'd to take it in, is found to be very bad, and to make the men *Sick*. An *Engliſh* Ship, the *Faulkon*, in a late Voyage to *Surrat*, being upon the Coaſt

of

of *Malabar*, was there forced to take in *Water*: Of which, the men who *Drank*, were taken with *Fluxes* and *Feavers* of that ill nature, that of about eighty five in the Ship, thirteen, or near one ſixth part, died in a ſhort time, and ſome languiſh'd long under dangerous Diſtempers.

And ſometimes *Ships* are brought to that want of *Water* as neither to have good nor bad; as in a long *Calm*: Which though it doth not often continue ſo long as to *Kill* the men; yet, beſides the anguiſh of *Thirſt*, it ſometimes makes way for divers *Diſeaſes*, as a *Surfeit*, *Dyſenteries*, or *Cholick*, upon the firſt Immoderate Drinking.

Sometimes alſo, it is an occaſion

caſion of great danger both to *Men* and *Ship*. Not long ſince, a *Ship* went to *Sea*, betwixt *Cheſter* and *Dublin*, pretty well provided with *Water*. But meeting with a *Calm* of ſome days, the *Paſſengers* were forc'd to Row ſeveral Leagues to the *Welſh* ſhore; in which time, if a Storm had happen'd, the *Paſſengers* had been loſt in the Boat, and the *Ship* in all likelihood had been loſt for want of the Hands that were made uſe of in the Boat.

Nay it hath been known, that a whole Ship of men have Periſh'd for want of *Water*. About five years ſince one came in Laden with *Tobacco* from *Virginia*, in which all the *Paſſengers*

gers were found dead; having declar'd in a Writing which they had Nail'd upon the *Maſt*, *That they had Periſh'd for want of* Water. All which Miſchiefs will be avoided by the conſtant ſupply of *Freſh Sea-water*.

And not only in point of *Drink*, but alſo in *Meat*; moſt of which now Eaten is extream *Salt*. For which, all the care they have at *Sea*, is to Soak it before it is Boil'd; not in *Freſh-water* but in *Salt*. For if they ſhould uſe *Freſh-water*, they muſt lay in near double the quantity, the *Meat* being commonly ſhifted once in four hours, for three or four times. They ſay, indeed, that the Soaking of it in *Salt-Water*, fetcheth out the

Salt

Salt better than in *Freſh*. And for the firſt or ſecond *Soaking*, I believe it may; yet alſo, that a *Soak* or two in *Freſh-water* afterwards, will do beſt: Which, to keep the *Meat* from *Stinking*, as at that time it is apt to do, may be done ſo much the ſooner.

But many times the *Seamen* are put to ſtraits, as not only to *Soak* but alſo to *Boil* their *Meat* in *Salt-water*. Which inſtead of taking any *Salt* out of it, doth rather add to it; becauſe the *Boiling* of the *Sea-water*, makes it to become *Salter*.

Now from ſuch *Diet*, as this, what can be expected, but beſides the higheſt *Scurveys*, a a Foundation alſo for *Dropſies*

and

and divers other *Diſeaſes*, of which the *Patients* either die quickly, or are hereby ſo far weakned, as with reſpect to the Publick, to be worſe than dead: For a man that is dead, is but one man loſt; but one that cannot work, is not only loſt himſelf, but alſo ſpends upon the Labours of another. All which miſchiefs will be very much prevented, by having of freſh Water enough for all uſes at hand.

And this, not only by emendation of bad Meat, but moreover in altering the very way of Diet: For where there is freſh Water, good Victuals may be made at any time without Fleſh. This, with Biſquet, Wheat, or

Rice

Rice, and a little Sugar, or Butter, will make very good Food.

I have thus comprized all that is neceſſary to be ſaid upon this matter, in as few words as I could, that I might not ſeem to miſ-ſpend thoſe precious minutes whereof your Majeſty hath ſo few to ſpare: nor ſhould I have preſumed to have intrench'd on them at all, had not your Majeſty already judged this ſubject worthy your Royal conſideration, for the great Uſefulneſs it may be of to Your *Forts* on *Land*, and Your moving *Caſtles* in the *Sea*; where alſo You are *Soveraign*; and the Advantage it muſt certainly bring to *Navi-*

gation

gation, that great *Medium* that Unites the far distant Parts of your Empire, and makes the whole World in a manner pay Tribute to the Throne of *Great Britain*. Those that see the Wonders of God in the *Deep*, when they find Relief in a Necessity, by which they must have perish'd without this Art; will praise your Majesties Goodness and Care, not only of your own People, but of all Mankind; and will justly account it a Miracle that you have raised a never failing *Spring* of *Fresh-Waters* in the midst of the *Ocean*.

FINIS.